

REMARKS

Overview

Claims 82-96 and 139-150 currently stand allowed, and the Examiner has objected to claim 155 as being dependent upon a rejected base claim but indicated that the claim would be allowable if rewritten in independent form.

The Examiner has also responded in the prior Office Action as follows: rejected claims 72-75, 97-115, 117-119, 121-138, 151-154, and 156-161 under 35 U.S.C. 102(a) as being anticipated by John Bates, et al., "Middleware Support for Mobile Multimedia Applications," (1997); and rejected claims 116, 120, 162, and 163 under 35 U.S.C. 103(a) as being unpatentable over Bates in view of Schmidt, et al., "There is more to context than location," (November 1998).

Applicants hereby amend claim 97 in order to clarify the subject matter of their invention, and further hereby amend claim 155 to rewrite it in independent form. Thus, claims 72-75 and 82-163 continue to be pending.

Discussion

Applicants thank the Examiner for the indication of allowable subject matter among the pending claims. However, the Examiner has rejected each of the other previously pending claims as being unpatentable over Bates, either alone or in combination with Schmidt. Nonetheless, each of the pending claims as rejected includes features and provides functionality not disclosed by these references, and thus is allowable over these cited prior art references.

In particular, each of the previously pending claims of the current application generally recites that events of interest for clients or other external entities are automatically detected or identified, such as by monitoring activities, so that appropriate notifications can be supplied when such events occur. For example, independent method claim 72 recites "monitoring activities of a module related to at least one of the state attributes; and without other input from the module or from a user, automatically determining an event whose occurrence is of interest to the module, the determining based on the monitored module activities." Similarly, independent

method claim 97 as amended recites “automatically analyzing received information related to at least one of the multiple state attributes in order to automatically determine at least one type of occurrence that may be of interest to at least one determined module.” The other independent claims include similar language.

This recited capability to automatically determine types of occurrences that may be of interest if they occur in the future can provide a variety of benefits in various situations. For example, when an external entity requests a value that is currently unavailable, it may be automatically determined that the external entity might be further interested in receiving future notification if the value becomes available, which eliminates the need for the external entity to send an explicit subsequent request for such notification. Other examples of automatically determined types of occurrences that are likely to be of interest include (but are not limited to) changes to a particular state attribute’s value (*e.g.*, based on repeated requests for a current value of the state attribute) or a change in availability of a particular source or client for values of one or more state attributes.

Conversely, neither Bates nor Schmidt appears to include any teaching or suggestion to automatically determine events that may be of interest to an external entity, such as based on monitoring relevant activities or receiving information to assist in that automatic determination. Instead, Bates appears to describe a system in which a client application must explicitly register a request to receive notifications before any such notifications will be provided to the client application. For example, as explicitly noted by the Examiner, “Bates . . . describes the trader receives a request from a client application [that] . . . may include interest in receiving notification when a specified event . . . occurs”. (Office Action dated March 15, 2004, page 4, emphasis added, and generally described in section 2.5 of Bates.) Moreover, Bates stresses that it is this explicit registration by clients of events of interest that “enables scalable and flexible construction of active applications”. (Bates, page 5, 2nd paragraph of section 2.2.) Thus, not only does Bates not teach or suggest the claimed techniques for automatically determining events and/or occurrences of interest, Bates teaches away from such a technique by emphasizing that manual client registration for specific events is a critical aspect that enables the Bates system.

Schmidt appears unrelated to any such client notifications, and thus does not remedy this failing of the Bates system.

In response to Applicants' prior explanation of the above failings of the prior art, the Examiner responded in the prior Office Action dated January 4, 2005 as follows:

"Bates describes a network of detectors that allows the location of the user to [be] pinpointed. Then, the location service collects badge events (i.e. automatically) and then passes them [to] the event server library using the operation signal. If an event matches any registered templates, the event system will notify (i.e. automatically) the appropriate client(s)." (Office Action dated January 4, 2004, page 15).

Thus, the Examiner describes that, after a request is made by a client application to register a template corresponding to events of interest, the Bates system will automatically detect the occurrence of such matching events. While such functionality to detect occurrences of explicitly specified events might exist in the prior art, such detection of event occurrences is unrelated to Applicants' claimed techniques for automatically determining the types of occurrences that are to later be detected if they occur. For example, the Bates system may be able to detect and provide a notification when a particular user is in a particular location based on a client application's prior explicit request for that information, but fails to provide any capabilities to automatically determine that the client application might be interested in knowing that information about that location of that user and to automatically providing such notifications to the client application without having received such an explicit request for the notifications. Moreover, as noted above, not only does the prior art fail to teach or suggest Applicants' claimed techniques, Bates actually teaches away from Applicants' techniques by emphasizing that manual client registration for specific events is a critical aspect for the Bates system. Thus, for at least the aforementioned reasons, the currently pending claims are patentable over the cited prior art references.

The pending dependent claims include the features of those claims from which they depend, and are thus allowable for at least the same reasons as those claims. Furthermore, various pending dependent claims also recite additional features lacking in the cited references and are allowable on the basis of those features as well. As one example, claim 156 recites that "additional information for each of the one or more values includes information related to one or

more times at which the value is accurate.” While Bates mentions that “related work” is underway to improve the “accuracy … of a location service” (Bates, page 6, 1st paragraph), the accuracy does not appear to be associated with a value in the manner claimed, wherein additional information is related to times in which the value is accurate. Other dependent claims also recite additional features lacking in the cited references, although these additional features are not enumerated here for the sake of brevity.

Conclusion

In light of the above remarks, Applicants respectfully submit that all of the pending claims are allowable. Applicants therefore respectfully request the Examiner to reconsider this application and timely allow all pending claims. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 694-4815.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,
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